Lessons Learned Working Group

Update to SELLS

DOE Nevada Operations Office

March 15, 1999

D. Plung, Co-chair

The task of the DSC Working Group on Lessons Learned

To define the necessary expectations, ownership, effective implementation and sustained execution of a corporate lessons learned approach that will support the principal mechanisms of Integrated Safety Management, providing a key feedback mechanism to promote continuous improvement and informed business and technical decisions

—define the expectations for a successful lessons learned approach

—tailor the structure to the unique needs of DOE

—articulate steps needed

Purpose

DOE will use Lessons Learned in support of Integrated Safety Maangement and to improve the quality of decision making by increasing the availability, usefulness, and effective use of information (experience expertise) that adds to DOE's and DOE contractors' ability to do work safely.

The Vision

DOE and DOE contractor personnel have available the entire knowledge base of DOE and best industry practices to assist in the design, planning, and performance of safe work.

They know where to go to locate the information.

They are eager to share knowledge and experience to advance the missions of the Department.

The Department recognizes the value and contribution of those who share and leverage knowledge.

Objectives

—To deliver higher value to DOE customers and stakeholders

—To bring more intellectual capital to bear on solutions
—particularly as regards unconventional & uncertainty challenges

—To apply best known practices to conventional work

—To promote information and experience exchange as an expected component of the DOE work routine

Development strategy & timeline

—diverse, experienced team
ISMS, WSS, EWP, field, HQ

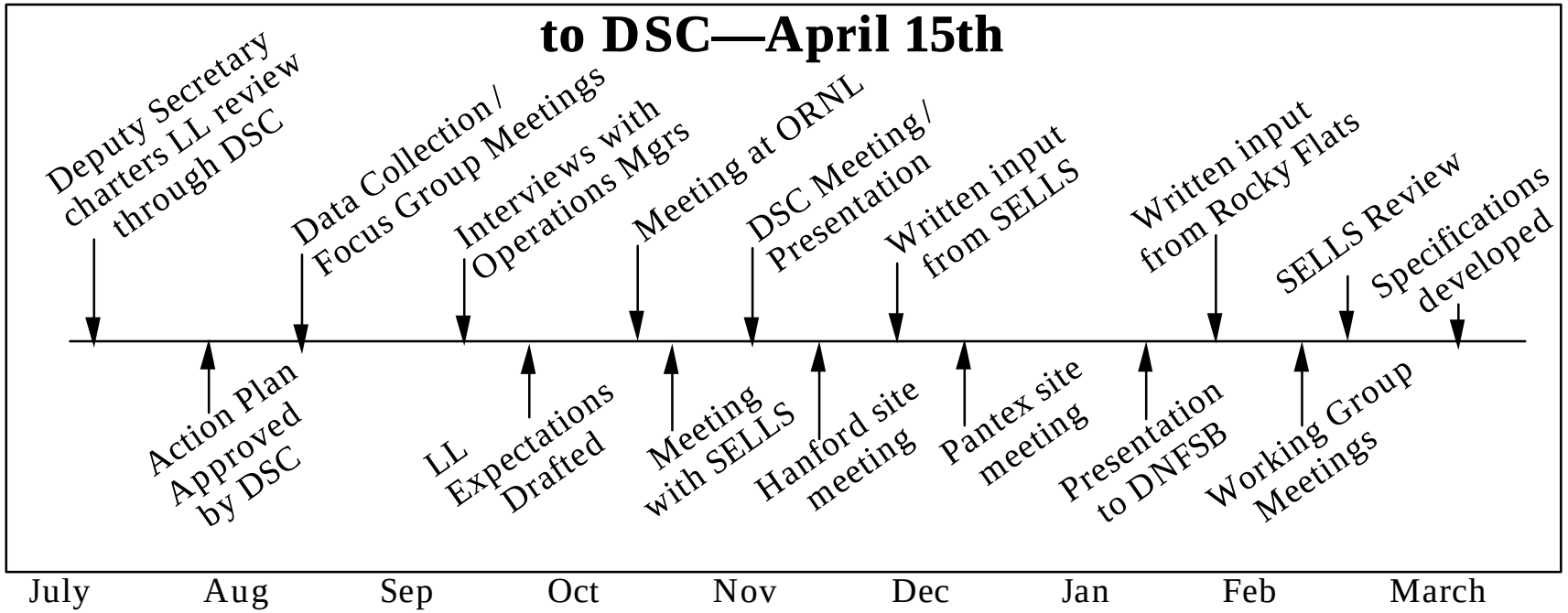
—series of working meetings

—interviews with field office managers

—reviews with / input from DSC and SELLS

—formal site visits
—ORNL
—Pantex
—Hanford
Hanford Environmental Health Foundation
Pacific Northwest National Laboratory
Fluor Daniel Hanford Bectel Hanford
Richland Operations Office

Recommendation to DSC—April 15th



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Lessons Learned is intrinsically part of ISM

1. Line management is responsible for the protection of employees, the public & the environment

2. Clear & unambiguous lines of authority are established and maintained

3. Personnel possess the experience, knowledge, skills and abilities necessary to discharge their responsibilities

4. Resources are effectively allocated

5. Before work is performed, hazards are evaluated and appropriate standards and requirements established

6. Adequate controls are tailored to the work

7. Operations are authorized

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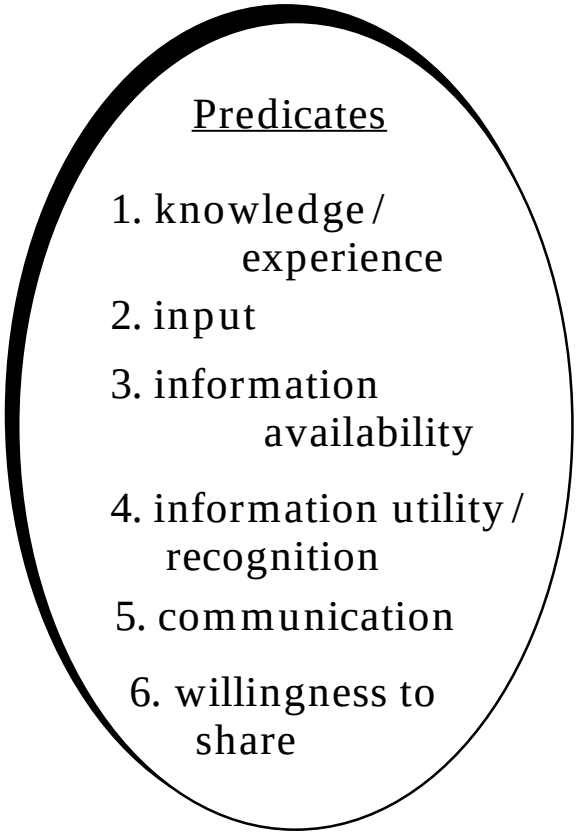

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LESSONS LEARNED

The Business Case

Issues with current system	Needs not addressed
—Deficiency not LL oriented —Relevance of information not easy to determine; analyses not valued —Perceived as predominantly a staff function (collateral duty); no senior championship — LL mandates not integrated; focused on specific subject of policy or directive (e.g., Occurrence Reporting, ISM Verfications) —Lack of communication (within sites, site to site, field to HQ, PSO to PSO) —LL derived from individual events; conclusions not tailored —Product volume rather than quality of product perceived as measurement thrust —Clear expectationsfor the program not established by DOE —Delivery of LL to end user often cumbersome, time consuming and not effective (e.g., sufficiency of "required reading" at individual worker level)	—There are recognized, yet unserved, needs for sharing of information —The numerous existing informal information sharing activities are not widely known or fully taken advantage of —Best management practices need to be captured —LL need to include experience gained in areas beyond ES&H (and commensurate broadening of champions/sponsors

This initial analysis led to development of a set of expectations

Program Scope

—positive and negative lessons

—focus on items of relevance / not compliance

—not limited to safety

—relationships with other systems and to other ISM elements (e.g., feedback & assessment) clearly articulated

—lessons learned only (not all required / regulatory reporting)

—recognizes and encourages other forms of horizontal sharing

Expectations: cont'd

Infrastructure Administration

—transparent and non-intrusive to user community

—performance measured by usability, usefulness, & utilization

—uses, to the degree possible, other systems and support structures and networks (e.g., SELLS)

—clearly defined ownership

—specified, but nonrestrictive, structuring of data collection & management

Specification: cont'd

Information

Input

—defined input thresholds / criteria

—context driven

—local determination of relevance

—no stigma / blame assigned

—defined input obligations / incentives

Access

—customizable

—push & pull methodologies

—simple search mechanisms

—unlimited read capability

Use

—supports, but does not direct, site / contract level LL programs

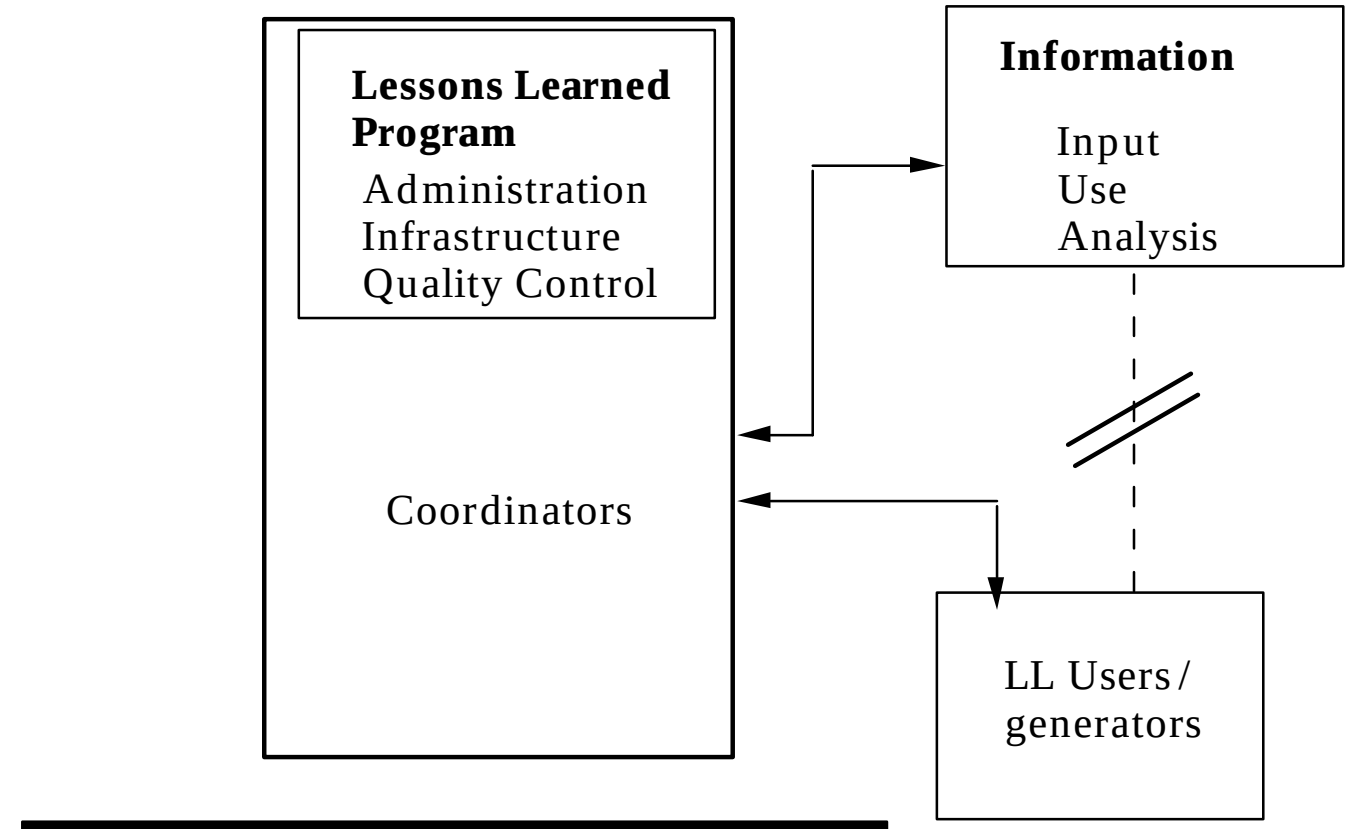
—local determination of relevance

—defined user obligations

—complements (encourages) direct horizontal sharing

—incentive for sharing established

The Working Group interviews, visits, and analyses indicate a major tension in the current program



Coordinator as owners of the program & the information

SELLS Analysis Comparing Working Group LL Expectations List vs. DOE-Std-7501-95 Highlights Perceptual & Real Issues With Current System

Addressed in Standard	
—positive & negative experiences	X*
—focus on ES&H and non-ES&H	X*
—performance not compliance based	X*
—transparent /simple to use	X*
—supports all levels of work definition	X*
—people encouraged, not required to submit info	X*
—is a system designed for use for improved performance	X*

Issues cited as needing resolution

—clearly defined ownership

—incentives needed to promote sharing

—performance measures need to be developed

—people not inclined to report "mistakes"

—making people knowledgeable about the availability of information

Is perception truly a reality?

* Indicates a difference as perceived by the user community

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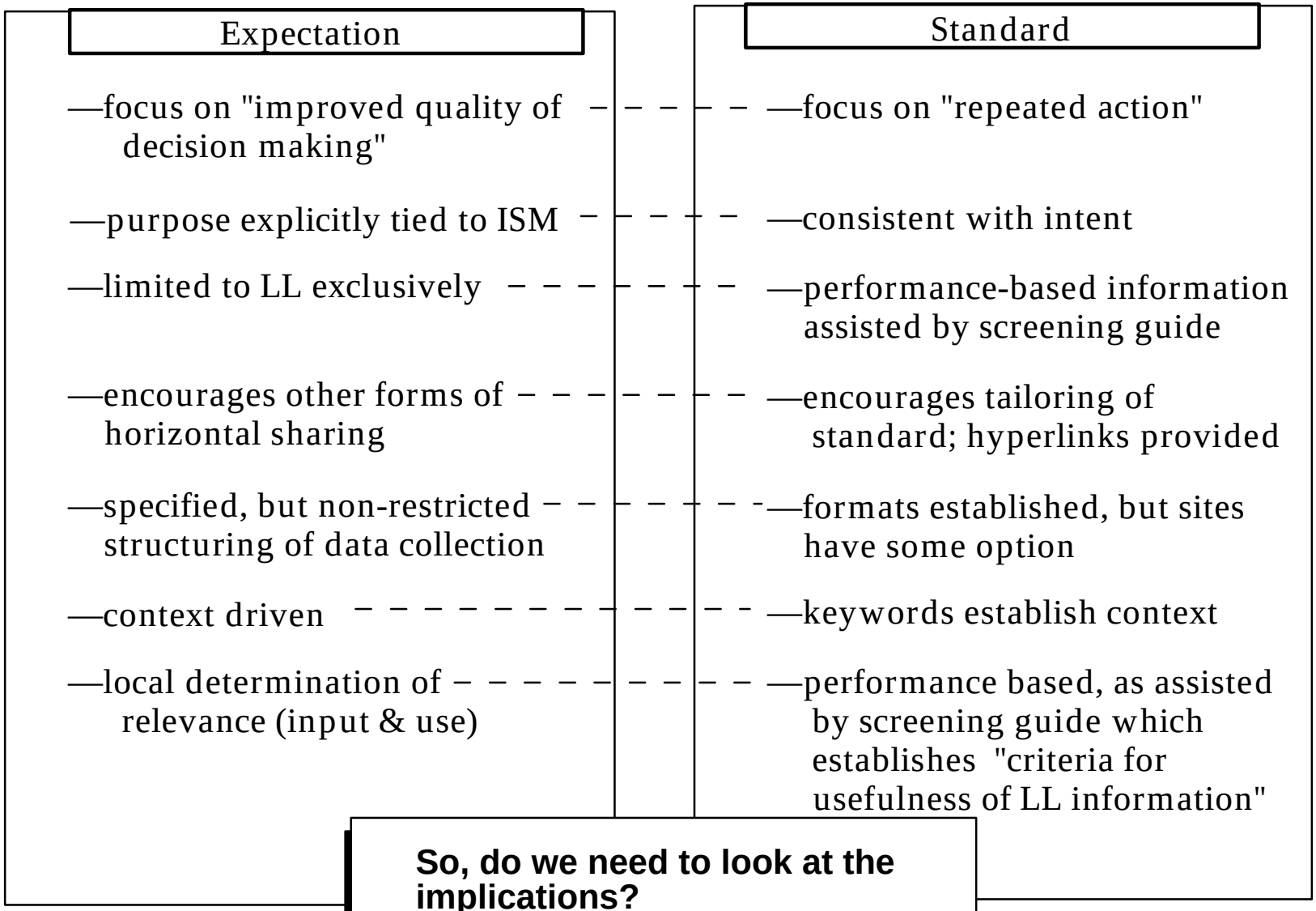
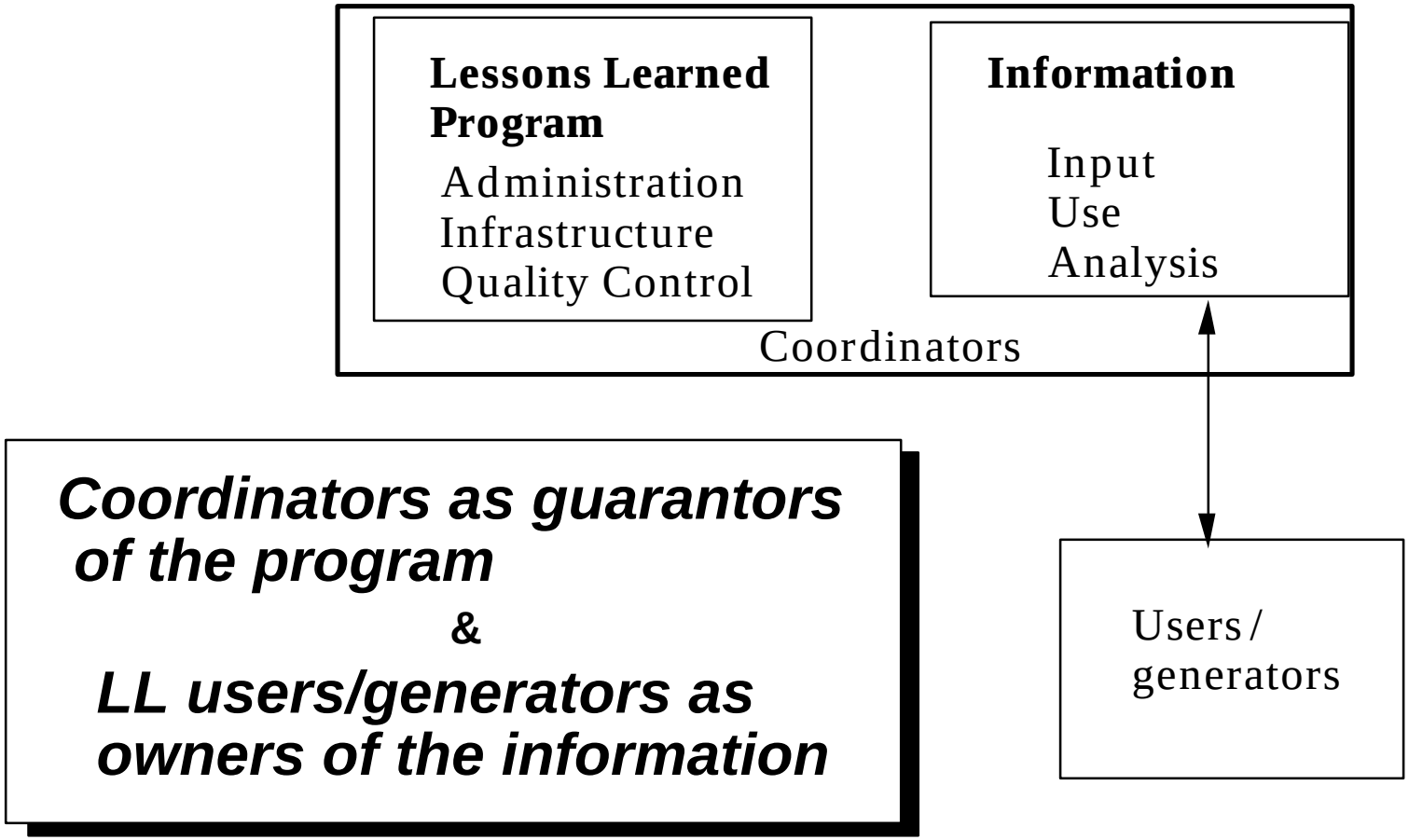
Additional Key Distinctions Exist Between the Expectations & the Existing Standard (based on analysis provided by SELLS)



The proposal the Working Group is developing provides a more productive alliance between users and coordinators



Coordinators as guarantors of the program

&

LL users/generators as owners of the information

The redefinition reflects a shift in the underlying philosophy

Element	Codification Strategy*	Personalization Strategy*
User/owner expectation for system	Transferability of experience without need for personal interaction	Improved quality of decision making achieved through interaction & direct sharing
Stakeholder expectation	Reuse of solutions	Improved performance through sharing of broader expertise / experience / personnel
Primary strategy	Capture detailed information structured based on defined reuse scenarios	Coordination of experts / expertise
IT reliance	Significant:: databases, structuring / application / user algorithms	Minimal: Information leveraged as input to analytical process, not as principle output
Product	Documents / reports	Documents as points of departure for direct (horizontal sharing
Strategic Balance		
Current	app. 85%	app. 15%
Working Group proposal	app. 60%	app. 40%

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*Terminology from "What's Your Strategy for Managing Knowledge?", HBR, March-April 1999, pp. 106-116.

Improving the quality of decision making involves three critical elements

Changing the culture—behavior

—formal tie of Lessons Learned to ISM

—potential use of policy statement

—defined champions / sponsors

Providing the right tools—quality, access, timeliness

—specification for the Lesssons Learned approach

—user teams to define information needs

—user teams for non-computer components

—IT team to recommend tools to Working Group

Assuring the effectiveness—does it work?

—feedback mechanisms

—new measures of value (e.g., demonstration of use)

—incentives for input

The Working Group is recommending DOE revisit the definition of Lessons Learned

Lessons Learned=

The process of gathering, compiling, and sharing information for use across the complex to generally improve the quality of decision making. These include the documentation of positive and negative performance, experience, or practices that have the potential to add value, provide opportunities to learn from the experience of others, encourage continuous improvement, and prevent recurrence of problems.

The Working Group is also recommending a set of specifications that build upon the expectations developed and insights gained

What Information do we want?

—Lessons Learned
—Positive & negative
—Focus on safety but others allowed
—Multimedia
—Increased productivity / decreased costs noted
—Context in which lesson was learned
—Links / or subsumes existing systems [(e.g., SELLS server (alerts)]
—Identify who may be interested in input information
—References to additional information
—User defined needed information
—Minimal essential information to enable local determination of relevance
—Relevant—that which can contribute to improved decision making

Specification: cont'd

How is it gathered?

—minimum thresholds are identified
—locally defined
—not just reportability
—positive and negative
—all levels of organization
—DOE and contractor
—Gathered at the user end by those who do the work

How is it maintained?

—from user perspective linkages are invisible
—prudent use of resources
—distributed or centralized (tbd)
—periodically reviewed—currency / accuracy
—allow contextual / hierarchical relationship identified

How is it retrieved or shared?

—unlimited direct access
—push & pull (searchable and auto distribution)
—supports user profiles (subscription)
—electronic / paper / multimedia
—horizontal sharing activities and media encouraged

Specification: cont'd

Who does it?

—comes from / goes to all levels of organization
—most knowledgeable of work / lessons learned
—participation not restricted
—input=all; output=all maintain=custodian
champion=line management
sponsor=DOE HQ

What is upside; what is downside?

—help doing better
—visible if work don't without benefit of lessons learned
—contractual implications vis ISM
—potentially tied to performance evaluations (personal & contractor)
—lower resource needs

Who pays?

—minimal additional cost beyond ISM investment
—integrated with existing funding
—start up / maintenace costs as low as possible

The path forward becomes evident